



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,393	08/23/2005	Thomas Bertin-Mouroit	265017US6PCT	3870
22850 7590 05/27/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER PERRY, ANTHONY T				
ART UNIT 2879		PAPER NUMBER		
NOTIFICATION DATE 05/27/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

Office Action Summary

Application No.

10/523,393

Applicant(s)

BERTIN-MOUROT ET AL.

Examiner

ANTHONY T. PERRY

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-36 and 38-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-36 and 38-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 12/04/09, 1/15/10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/26/10 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 34, it is unclear how the electrodes can be made up of an array of parallel bands that are separated by a non-conductive space and still be covering "all of the external face of the respective glass substrate", as claimed in independent claim 25, from which claim 34 depends.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25-33, 38, 39, 41, 42, 45, 46 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Winsor (US 5,466,990).

Regarding claim 25, Winsor discloses a flat lamp comprising: at least two glass substrates (65,66) kept mutually parallel and defining an internal gas-filled space (12), each glass substrate having an internal surface facing in a direction of the internal space and an external surface opposite to the internal surface and facing in a direction away from the internal space; and two electrodes (40 and 38), a first of the two electrodes associated with a first one of the glass substrates and a second of the two electrodes associated with a second one of the glass substrates, the two electrodes being away from the internal surface, at least one of the first and second electrodes is located on the external surface side of the respective substrate (66) and at least one of the electrodes (40) covers all of the external face of the respective glass substrate (66), wherein the internal surface of at least one substrate is coated with a phosphor material (32), wherein said at least one electrode on the external surface side is covered with at least one electrical insulation (39, bottom layer of Fig. 6, not labeled) that may be formed by at least one of the glass substrates or be associated with at least one of the glass substrates (for example, see the abstract and Fig. 6).

Regarding claim 26, Winsor discloses the flat lamp, wherein at least one electrode (40) is affixed to the surface of the external face of the substrate (66) with which it is associated and is covered with at least one electrical insulation, the electrode being incorporated into the surface of the glass substrate or of the electrical insulation (for example, see Fig. 3).

Regarding claim 27, Winsor discloses the flat lamp, wherein at least one electrode is incorporated into the electrical insulation (39, bottom layer of Fig. 6, not labeled), either within its very thickness or on a surface (for example, see Fig. 6).

Regarding claim 28, Winsor teaches the electrical insulation (dielectric layers) being formed of glass.

Regarding claim 29, Winsor teaches adding a thin film, such as magnesium oxide (additional electrical insulation), to the dielectric layers (for example, see col. 14, line 57-66).

Regarding claim 30, Winsor discloses the lamp as claimed in claim 26, wherein at least one additional electrical insulation (68) is formed by another glass substrate (68) that is laminated to at least one glass substrate (65) by an intermediate film (70,72) that can make the two substrates adhere to each other (for example, see Figs. 5 and 6).

Regarding claim 31, Winsor discloses the flat lamp, wherein the electrical insulation constitutes a sheet exhibiting an optical effect (secondary emission) (for example, see col. 14, line 57-66).

Regarding claim 32-33, Winsor discloses the flat lamp, wherein the electrodes (40 and 38) are continuous, conducting and transparent coatings, each located on an external face side of a substrate and covering all of the external faces of the substrates (for example, see Fig. 6 and col. 5, lines 4-5).

Regarding claim 38, Winsor discloses the lamp as claimed in claim 37, wherein the phosphor is selected to determine a color of illumination (for example, see col. 14, lines 32-50).

Regarding claims 39 and 41, Winsor teaches spacers (48), made of a non-conducting glass material, placed between the two glass substrates (for example, see Fig. 7 and col. 7, lines 1-3 and col. 8, lines 41-44).

Regarding claim 42, Winsor discloses the lamp of claim 39, wherein the lateral surfaces of the spacers (48) are coated with a phosphor material (for example, see Fig. 7).

Regarding claim 45, Park the contour of the glass substrates is polygonal, concave or convex, or curved with a constant or variable radius of curvature (for example, see Fig. 6).

Regarding claim 46, Park discloses the lamp having two illuminating faces (for example, see Fig. 6 and col. 5, lines 4-5).

Regarding claim 48, Park discloses an application of the flat lamp in the production of architectural or decorative elements that illuminate and/or have a display function (for example, see col. 10, lines 62-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 35, 40, 43, 44, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winsor (US 5,466,990).

Regarding claim 35, Winsor teaches the electrodes are transparent conductive films, but does not specifically recite the material used. However, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the

intended use as a matter of obvious design choice. It is well known in the art to use a metal oxide having electronic vacancies, including material, such as ITO, for forming transparent electrodes. Accordingly, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have used ITO for the transparent electrodes, since the selection of known materials for a known purpose is within the skill of the art.

Regarding claim 40, the combined invention of Park and Eliasson does not specifically teach the separation between the two substrates being around 0.3 to 5 mm. However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an appropriate range for the distance separating the two substrates (discharge space), since optimization of workable ranges is considered within the skill of the art.

Regarding claim 43, Winsor does not specifically recite the gas pressure in the internal space being around 0.05 to 1 bar. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an appropriate range for the gas pressure of the lamp, since optimization of workable ranges is considered within the skill of the art.

Regarding claim 44, Winsor does not specifically recite a hole in one of the substrates that is obstructed by a seal. However, it is well known in the art to include an exhaust hole in order to provide a means for evacuating the discharge space and introducing the desired gas mixture, after which the hole is sealed. It is noted that the applicant's specific placement of the

hole, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore, it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any outer member of the flat lamp for providing the hole, as long as the hole is capable of providing a means for introducing gas into the envelope, and that it can be sealed thereafter.

The Examiner notes that the claim limitation that the “hole is drilled” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding claim 47, Winsor teaches a process for manufacturing a lamp comprising at least two glass substrates (65,66) kept mutually parallel and defining an internal gas-filled space (12), each of the at least two glass substrates having an internal surface facing the gas-filled space and an external surface opposite to the internal surface facing in a direction away from the gas-filled space, comprising: associating a first of two electrodes with a first of the two glass substrates, and associating a second of the two electrodes with a second one of the glass substrates, the two electrodes (40 and 38) being away from the internal space, coating the internal surface of at least one substrate turned toward said internal space with a phosphor material (32); affixing at least one electrodes (40) to all of the external surface of the substrate (66) with which it is associated and covering all of the at least one electrode on the external surface side with at least one electrical insulation (39, bottom layer of Fig. 6, not labeled), the

electrode being incorporated into the surface of the glass substrate or into the thickness or on the surface of the electrical insulating material (39), comprising: screen-printing phosphor on at least one of the glass substrates (col. 11, lines 8-10); depositing spacers (48) on one of the glass substrates; joining the glass substrates together to be parallel; sealing an internal space by a peripheral sealing material (16,20) (col. 12, line 63 – col. 13, line7); replacing atmosphere contained in the internal space with plasma gas (col. 10, lines 6-8); joining at least one first electrical insulation (39) to at least one glass substrate (66), the electrical insulation configured to cover or to incorporate, internally or on a surface, the electrode (40) with which one of the faces of the substrates is to be associated (for example, see Figs. 6 and 7).

Winsor does not specifically recite drilling a hole in one of the substrates. However, it is well known in the art to form an exhaust hole in order to provide a means for evacuating the discharge space and introducing the desired gas mixture, after which the hole is sealed. It is noted that the applicant's specific placement of the hole, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore, it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any outer member of the flat lamp for providing the hole, as long as the hole is capable of providing a means for introducing gas into the envelope, and that it can be sealed thereafter. It is noted that the applicant's specific method of drilling, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore, it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any known method of forming the exhaust hole.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winsor (US 5,466,990) in view of Gellert et al. (US 5,006,758).

Regarding claim 36, Winsor does not specifically recite that one of the electrodes is an integrated metal grid incorporated into a plastic film. However, Gellert teaches a flat lamp that has one electrode (6) being in the form of a metal grid that is incorporated into a plastic film (3) (for example, see col. 3, lines 35-37 and Fig. 1). Gellert et al. teach that the use of such an electrode embedded in plastic reduces the manufacturing time as well manufacturing costs (for example, see col. 4, line 67 - col. 5, line 19). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an integrated metal grid incorporated into a plastic film as at least one of the electrodes in the device taught by Winsor, in order to reduce time and costs of manufacturing the device.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anthony Perry/

Anthony Perry
Patent Examiner
Art Unit 2879

/NIMESHKUMAR D. PATEL/
Supervisory Patent Examiner, Art Unit 2879